Mail file

28 March 1967

STAT MEMORANDUM FOR: [redacted]

The following points may be of interest with respect to paragraph 4 of the attached memo: [redacted] STAT

1. Environmental information portrayed at various scales is a recognized military requirement. The nature of the terrain and surface materials, the types and densities of vegetation, and the hydrology and soil moisture conditions are among the factors of interest particularly to the Army. More R&D in the study of color photography for analyzing and mapping the distribution of significant environmental data should be of great benefit to the military. Much can be done in varying color densities, etc., to assist in photo-interpretation. Also exposure parameters are important and controversial, particularly the sun angle.

2. The reference to compatible data reduction procedures brings to mind a report that the UNAMAC can be used to obtain orthophotos in color. Color separations can be made on plates and introduced individually into the UNAMAC for scanning. This means three runs for the three primary colors. The resultant color-separated films can then be processed to obtain the full color orthophotos.

STAT [redacted]

DIA review(s) completed.

ILLEGIB

[redacted]

Mr. a file

DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D. C. 20301

MAR 24 1967

SUBJECT: Color Photography for DoD Mapping, Charting and Geodesy from Satellite Systems

TO: Distribution List

Enclosure, subject as above, represents the present DoD position as developed with technical representatives of the Military Departments and coordinated with DoD members of the COMOR Mapping, Charting and Geodesy Working Group.

STAT [redacted]

DIA Member
COMOR MC&G Working Group 1 Encl a/s

Distribution:
Chairman, COMOR MC&GWG
COMOR Members:
DIA
Army
Navy
Air Force
ACSI (LtCol Stukhart)
OCE (Mr. Rinehart)
NAVOCEANO (Mr. Wolf)
AFNINCB (Mr. Eldridge)

[redacted]

ILLEGIB

COLOR PHOTOGRAPHY FOR DOD MAPPING, CHARTING AND GEODESY FROM SATELLITE SYSTEMS

1. Requirement

For cultural and physical features, color photography provides input to the interpretation of features for maps and charts. However, the advantages of color are not sufficiently great to offset significant degradation in resolution obtainable from black and white photography. For underwater features of concern to the Navy, down to depths of 10 fathoms, color photography may provide useful information for hydrographic charting. Aircraft tests in progress should further define this underwater requirement in 60-90 days.

2. Standard Color Photography

This data, already available from satellites, is sufficient for analysis of possible application. Its loss in resolution, compared to black and white, does not justify additional photography being collected by satellites except as it may be possible to arrange for some portion of the film to be allotted to Navy needs for underwater features, assuming color photography proves useful for this purpose.

STAT

3. Improved Color Photography

The MC&G community is interested in further developments in the direction of Bi-color photography and photography of the Tech-Ops, Incorporated type. Insofar as it may become practical to collect this type of photography without significant loss in resolution, the MC&G community would like to participate in the planning of tests or operations using color photography, and will establish appropriate utilization tests. Separate activities will be under taken, both in the development and acquiring of aerial color photography, to enable more definitive testing and to obtain coverage for Navy needs.

4. Future R&D

In recognition of the limited analysis and experience to date, the specific role of color photography in mapping and charting is being examined in an R&D environment, outlining specific objectives and developing utilization techniques and procedures. Progress has resulted from examining several techniques, but more R&D is justified. The MC&G community desires to be kept informed of important technical developments in color photography in the acquisition field, in order that compatible data reduction procedures are developed.

Enclosure 1